Workshop on Hierarchical Multinomial-Processing-Tree Modeling

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Daniel W. Heck, Philipps-Universität Marburg

Basics of MPT Modeling

- 13:00 – 14:00: Model development & specification
  - MPT modeling (logic, examples)
  - Model development & identifiability
  - Parameter estimation & hypothesis testing
- 14:00 – 14:30: MPT modeling with multiTree
  - Model specification (EQN syntax, data files)
  - Identifiability concepts & checks
- *Break*

Hierarchical MPT Modeling

- 15:00 – 16:00: Bayesian hierarchical MPT modeling
  - MPT models & heterogeneity
  - Hierarchical MPT models
  - Bayesian estimation with MCMC sampling
- 16:00 – 16:30: Applications with TreeBUGS
  - Model fitting & convergence
  - Summary statistics, plots & model fit
- *Break*
- 17:00 – 18:30: Advanced hierarchical modeling with TreeBUGS
  - Between-subject comparisons
  - Within-subject comparisons
  - Continuous covariates
  - Optional: sensitivity analyses & simulations

- Optional: Overview of MPT mixture modeling of continuous data
  - Categorizing continuous data into bins (MPT-RT models)
  - Modeling of branch-specific continuous distributions (GPT models)
  - Serial process model for response times (RT-MPT)